

Current Status of Claims

1. *(original)*

A device for directionally guiding articles of different shapes that are being conveyed on a conveyor off the conveyor with the aid of a movable gate that is controllable to turn across the conveyor to an angle relative to
5 direction of movement of the conveyor,
characterised in

- that the gate has at least one rotary motor-driven fully circular disc which is configured to cause the article to be forcibly driven through aid of disc rotation along the gate, in a direction corresponding to the said
10 angle, off the conveyor and to an exit.

2. *(original)*

A device according to claim 1,
characterised in

- that the gate has two motor-driven, rotary and parallel discs
5 rotating in the same rotational direction, wherein the two discs are spaced by a distance that is greater than the largest cross-section of an article to be guided.

3. *(original)*

A device according to claim 2,
characterised in

- that the gate has a central position in which the two discs are
5 parallel to the longitudinal direction of the conveyor to allow articles to pass unobstructed therebetween.

4. *(currently amended)*

A device according to claim 2 [~~or 3~~],

characterised in

- that the two discs are driven by a common drive motor via a
- 5 common drive shaft, and that the two discs are arranged to be turned into said angle relative to a common pivot point located centrally above the conveyor.

5. *(currently amended)*

A device according to claim 1, [~~2, 3 or 4~~],

characterised in

- that said at least one circular disc has a non-vertical axis of
- 5 rotation.

6. *(currently amended)*

A device according to claim 1, [~~2, 3, 4 or 5~~],

characterised in

- that said at least one circular disc has a horizontal axis of
- 5 rotation.

7. *(currently amended)*

A device according to claim 1, [~~2, 3 or 4~~],

characterised in

- that said at least one circular disc has a non-horizontal axis of
- 5 rotation.

8. *(currently amended)*

A device according to [~~one or more of claims 1—7~~] **claim 1**,
characterised in

- that said gate is controllable to assume at least three angularly
5 different positions relative to the movement direction of the conveyor.

9. *(currently amended)*

A device according to [~~one or more of claims 1—8~~] **claim 1**,
characterised in

- that said gate is arranged to assume at least five angularly
5 different positions relative to the movement direction of conveyor.

10. *(currently amended)*

A device according to [~~one or more of the preceding claims~~] **claim 1**,
characterised in

- that said at least one circular disc has a speed of rotation which
5 yields a surface speed at a radial location on the disc where the disc
makes contact with the article, said speed being a function of the angle
which the gate turned relative to the direction of movement of the
conveyor.

11. *(currently amended)*

A device according to [~~one or more of claims 1—10~~] **claim 1**,
characterised in

- that said at least one circular disc has a speed of rotation which
5 yields a surface speed at a radial location on the disc where the disc
makes contact with the article, said speed being a function of the weight,
size and/or shape of the article.

12. *(currently amended)*

A device according to claim 10 ~~[or 11]~~,

characterised in

- that the speed of rotation of the circular disc is a function of the
- 5 movement speed of the conveyor.

13. *(original)*

A device according to claim 12,

characterised in

- that the speed of rotation of the circular disc is equal to or greater
- 5 than the movement speed of the conveyor.

14. *(currently amended)*

A device according to ~~[one or more of claims 1—13]~~ **claim 1**,

characterised in

- that said at least one rotary and circular disc is designed to cause
- 5 the article to be given an accelerated movement off the conveyor.

15. *(currently amended)*

A device according to ~~[anyone of the preceding claims]~~ **claim 1**,

characterised in

- that said at least one rotary and circular disc has a frictional
- 5 surface.

16. *(currently amended)*

A device according to claim 9 [~~or 10~~],
characterised in

- that the gate is cooperative with a flag device for detecting the
5 angular position of the gate relative to the direction of movement of the
conveyor.

17. *(original)*

A device according to claim 16,
characterised in

- that the flag device is optical, electromagnetic, capacitive or
5 electromechanical.

18. *(currently amended)*

A device according to [~~one or more of the preceding claims~~] **claim 1**,
characterised in

- that the gate is designed, upon turning into a desired angular
5 position, to cause, at the same time, movement of an auxiliary gate
cooperative with the gate and positioned essentially parallel to the gate at
a distance therefrom adapted to be able to pass the article through a space
therebetween.

19. *(currently amended)*

A device according to [one or more of the preceding claims] **claim 1**,
characterised in

- that a detector device for identifying or detecting any
5 characteristic features or parameters of the article is located upstream of
the gate and adjacent the conveyor.

20. *(original)*

A device according to claim 19,
characterised in

- that the device is, on the basis of said identified or detected
- 5 features or parameters, designed to control the gate to assume a desired angular position relative to the conveyor.

21. *(currently amended)*

A device according to claim 18 [~~or 19~~],
characterised in

- that device is, on the basis of said identified or detected features
- 5 or parameters, designed to control the speed of rotation of the at least one disc relative to the movement speed of the conveyor and/or the angular position of the gate relative to the conveyor.

22. *(currently amended)*

A device according to [~~one or more of claims 1—21~~] **claim 1**,
characterised in

- that the gate is designed to guide articles to said exit, wherein
- 5 said exit is, with the aid of the controllable gate, selectable from among at least a first and a second exit.

23. *(original)*

A device according to claim 22,
characterised in

- that at least one of said first and second exits is associated with
- 5 an post-treatment unit for the article with subsequent storage container or conveyor.

24. *(original)*

A device according to claim 23,
characterised in

- that said exit cooperates with a storage container.

25. *(original)*

A device according to claim 23,
characterised in

- that the post-treatment unit is a compactor or a disintegrator.

26. *(currently amended)*

A device according to claim 23 [~~or 25~~],
characterised in

- that the post-treatment unit for said first and said second exits
5 respectively are constructed differently, but are driven by a common
drive unit.

27. *(currently amended)*

A device according to [~~one or more of claims 1—26~~] **claim 1**,
characterised in

- that gate is designed for sorting articles in the form of empties,
5 for example, bottles or cans.